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Summary of Kinder Morgan Technical Testimony: Pig Launching and Receiving (Section 121)

Proposed Rule 20.2.50 – Oil and Gas Sector – Ozone Precursor Pollutants
Commencement of Hearing: September 20, 2021

Technical Witness

- Leslie Nolting, EHS Specialist / EHS Manager – Air Permitting Compliance, Kinder Morgan

- Resume and qualifications at Exhibit I of the Kinder Morgan NOI to Present Direct Technical Testimony

Overview

- Pig launching and receiving in the transmission and storage segment
- Emissions profile of Kinder Morgan pig launching and receiving
- NMED's evaluation of pig launching and receiving relies on data derived from gathering and boosting
- At the least, the monitoring frequencies must be reasonable

The ask:

That the Board accept NMED's proposed revised language in the September 16 draft rule that transmission pipeline pigging operations are not subjected to a monthly monitoring requirement, but rather must be monitored before and after pigging events.

Pigging in the Transmission Segment

- Typical functions of pigs:
  - Clear debris, scale, and liquids from the inside of the pipe (hydrocarbons and water condense collect inside gas gathering lines, causing pressure drop and reducing gas flow)
  - Inspect or monitor the condition of the pipe
- Transmission pipelines move pipeline quality natural gas
  - Contain fewer liquids
  - Pigged far less frequently
- Kinder Morgan practices:
  - Sometimes mechanically pigs pipelines annually, and at least every three years, for maintenance purposes.
  - Typically, we also do an in-line “smart pig” inspection once every five to seven years.

Emissions Profile: Pig Launching and Receiving

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- The VOC content of natural gas in the transmission segment is much lower than in other segments of the natural gas supply chain.

2020

Facility	Event Type	Sum of Physical Volume (ft^3)	Count of Event Count (number)	Year's MT Degassing Vent VOC [Note:*]	Year's Pounds Degassing Vent VOC [Note:*]	VOCs (US tons per year)	VOCs (Average US tons per year per event)
Blanco CS (EP)	(cs) Pig Launchers and Receivers	7040.134315	1	0.001	2.542	0.0013	0.00127
Lordsburg CS	(cs) Pig Launchers and Receivers	20935.70603	4	0.003	7.559	0.004	0.00094
San Juan M/L CS	(cs) Pig Launchers and Receivers	39750.94619	10	0.007	14.351	0.007	0.00072
White Rock CS	(cs) Pig Launchers and Receivers	113257.4712	5	0.019	40.890	0.020	0.00409

2019

Facility	Event Type	Sum of Physical Volume (ft^3)	Count of Event Count (number)	Year's MT Degassing Vent VOC [Note:*]	Year's Pounds Degassing Vent VOC [Note:*]	VOCs (US tons per year)	VOCs (Average US tons per year per event)
Afton CS	(cs) Pig Launchers and Receivers	37300	1	0.006	13.467	0.007	0.00673
Blanco CS (EP)	(cs) Pig Launchers and Receivers	76259.72	4	0.012	27.532	0.014	0.00344
Lordsburg CS	(cs) Pig Launchers and Receivers	33922.2	4	0.006	12.247	0.006	0.00153
White Rock CS	(cs) Pig Launchers and Receivers	218178.69	4	0.036	78.770	0.039	0.00985

The annual VOC emissions are all less than 0.04 tpy

NMED's Evaluation of Pig Launching and Receiving

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- Exhibit 32 of NMED's Notice of Intent to Present Direct Technical Testimony is largely based on the gathering and boosting system
- The following statements either do not apply to transmission pipelines or paint an incomplete picture of transmission pipeline pigging operations:
  - "Natural gas passing through gathering pipelines contains VOCs, as well as other impurities such as water and carbon dioxide."
    - Incomplete picture: transmission = low VOC content natural gas.
  - "As this gas passes through the pipeline system, any change in temperature or pressure may result in development of natural gas condensates in a liquid phase in the pipeline."
    - This is not true of transmission pipelines.
  - "Emissions to the atmosphere may occur at both the pig launcher and receiver when the pipeline is opened to insert or extract the pig."
    - Incomplete picture: while technically true of transmission pigging operations, such emissions are minimal in the transmission context.

Monitoring Frequencies Must be Reasonable

- Kinder Morgan asks the Board to adopt NMED's September 16 rule proposal that strikes a balance and reasonably modifies monitoring requirements for less frequently pigged units

C. Monitoring requirements:

(1) The owner or operator of an affected pig launching and receiving site shall inspect the equipment for leaks using AVO, RM 21, or OGI on either:

(a) a monthly basis if pigging operations at a site occur on a monthly basis or more frequently; or

(b) prior to the commencement and after the conclusion of the pig launching or receiving operation, if less frequent.

(2) The monitoring shall be performed using the methodologies outlined in Subsection (C) of 20.2.50.116 NMAC as applicable and at the frequency required in Paragraph (1) of Subsection (C) of 20.2.50.121 NMAC. The monitoring shall be performed when the pig trap is under pressure.

(3) An owner or operator complying with Paragraph (1) of Subsection B of 20.2.50.121 NMAC through use of a control device shall comply with the monitoring requirements in 20.2.50.115 NMAC.

(4) The owner or operator shall comply with the monitoring requirements in 20.2.50.112 NMAC.

Questions?